

Appl. No. 09/986,222  
Amdt. dated August 24, 2005  
Reply to Office Action of February 24, 2005

PATENT

**Amendments to the Specification:**

Please replace paragraph [0090] with the following amended paragraph:

[0090] Step ~~704~~ ~~702~~ comprises the steps of increasing the bandwidth of pilot filter 310 as the estimated velocity increases, and decreasing the bandwidth of pilot filter 310 as the estimated velocity decreases.

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method of improving the reception of a signal in a wireless communications device (WCD), comprising the steps of:

(a) estimating the velocity of the WCD based on a level crossing rate, determined based on complete traversal of a hysteresis range bounded by an upper threshold and a lower threshold; and

(b) adjusting a filter bandwidth in the WCD in response to the estimated velocity, to mitigate the introduction of noise and distortion to the signal.

2. (Original) The method of claim 1, wherein step b) comprises the steps of:

(1) increasing the filter bandwidth as the estimated velocity increases;  
and

(2) decreasing the filter bandwidth as the estimated velocity decreases.

3. (Original) The method of claim 1, wherein steps a) and b) are performed at periodically-occurring time increments.

4. (Canceled)

5. (Original) The method of claim 1, wherein the signal is a pilot signal.

Appl. No. 09/986,222  
Amdt. dated August 24, 2005  
Reply to Office Action of February 24, 2005

PATENT

6. (Original) The method of claim 1, wherein step (b) comprises the steps of:  
(1) providing a plurality of predetermined bandwidths, wherein each predetermined bandwidth corresponds to a particular velocity range; and  
(2) setting the filter bandwidth to one of the plurality of predetermined bandwidths that corresponds to the estimated velocity.

7. (Original) The method of claim 6, wherein step (1) includes the step of providing a plurality of filter components, wherein each filter component has a corresponding bandwidth.

8. (Currently Amended) The method of claim 6, wherein step (1) includes the step of providing a lookup table 504 that translates a velocity estimate into one or more filter parameters, wherein the one or more filter parameters determine the filter bandwidth.

9. (Currently Amended) A system for improving the reception of a signal in a wireless communications device (WCD), comprising:

a velocity estimator that generates a velocity estimate based on a level crossing rate determined based on complete traversal of a hysteresis range bounded by an upper threshold and a lower threshold; and

a filter having a bandwidth that is adjusted in response to velocity estimate, to mitigate the introduction of noise and distortion to the signal.

10. (Original) The system of claim 9, wherein said filter is adapted to increase the filter bandwidth as the estimated velocity increases, and decrease the filter bandwidth as the estimated velocity decreases.

11. (Canceled)

12. (Original) The system of claim 9, wherein the signal is a pilot signal.

13. (Original) The system of claim 9, wherein said filter comprises:

Appl. No. 09/986,222

PATENT

Amdt. dated August 24, 2005

Reply to Office Action of February 24, 2005

a plurality of predetermined bandwidths, wherein each predetermined bandwidth corresponds to a particular velocity range; and

means for setting the filter bandwidth to one of the plurality of predetermined bandwidths that corresponds to the estimated velocity.

14. (New) The method of claim 1, wherein a level crossing is determined each time a signal power begins outside of the hysteresis range and completely traverses the hysteresis range.

15. (New) The method of claim 9, wherein a level crossing is determined each time a signal power begins outside of the hysteresis range and completely traverses the hysteresis range.